PCV79
IMPACT OF GENERIC CLOPIDOGREL IN THE ACUTE CORONARY SYNDROME MANAGEMENT OF HONG KONG
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OBJECTIVES: This study was conducted to compare health and cost outcomes utilizing either Ticagrelor versus Plavix in the management of acute coronary syndrome (ACS) patients, and impact of generic Clopidogrel used in Hong Kong. **METHODS:** A decision analytic model was used to perform a cost-effectiveness analysis of treating ACS patients for one year with Ticagrelor plus aspirin strategy compared with Plavix (or generic Clopidogrel) plus aspirin strategy from Hong Kong health care provider perspective. To estimate discounted (3%) lifetime costs, quality-adjusted life years (QALYs), and incremental cost-effectiveness ratios (ICERs). The health states in the model included patient in ACS without event, myocardial infarction (MI), and death from vascular cause. The model simulates a cohort of 45-year-old patients with ACS, and Markov cycle is one year. The time horizon was lifetime (85 years old). Event rates were adopted from the PLATO study, and the ACS registry in the Prince of Wales Hospital (PWH) in Hong Kong. Probabilistic sensitivity analyses using Monte Carlo simulations were conducted to assess parameter uncertainty. **RESULTS:** Compared with the Plavix (or generic Clopidogrel) treatment strategy, the Ticagrelor treatment strategy for ACS, STEMI, and UA / NSTEMI patients were associated with ICERs of HK$ 34,441(35,304), HK$ 32,753(33,567), HK$ 39,343(40,417) (1US$ = 7.8HK$) per QALY gained, respectively. Ticagrelor treatment strategy was cost-effective over 99% of the Monte Carlo simulation using a cost-effectiveness threshold of < 1x GDP per capita of Hong Kong. **CONCLUSIONS:** The Ticagrelor strategy is considered cost-effective at three times per capita GDP threshold compared with Plavix or generic Clopidogrel strategy in the management of ACS patients in Hong Kong. The impact of ICER values of generic clopidogrel compared with Plavix is not significant even the sextuple cost in Hong Kong.

PCV80
COST EFFECTIVENESS ANALYSIS OF MRI GUIDED ABLATION BASED ON THE DECAAF TRIAL
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OBJECTIVES: Catheter ablation, an expensive procedure with high Atrial Fibrillation (AF) recurrence rate, is indicated in patients refractory to drug therapy or in patients with drug tolerability issues. The study examines the CE of MRI-guided ablation vs. current standard of care (SoC) of ablating all eligible patients in preventing AF. **METHODS:** A decision tree model was developed with a payer perspective over a 1-year time horizon. Participants of the DECAAF trial (n=260), prospective multicenter-blinded study, were categorized to Utah Stage I (19%), II (41%), III (31%), and Stage IV (9%) based on degree of atrial structural remodeling quantified using delayed enhancement MRI. Proportion of patients with post ablation AF recurrence for Utah Stage I-IV was 16.33%, 30.84%, 45.68%, and 58.33% respectively. Survival from outcomes was considered as effectiveness. Selective ablation was defined as ablating Stage I and II AF patients and medically managing Stage III and IV patients. Recurrence rates from the DECAAF trial and other costs and probabilities from the literature were used in the model. Probabilistic sensitivity analysis was conducted on all variables in the model. **RESULTS:** The mean total per patient annual cost in the MRI-guided selective ablation cohort was $23,238 compared to $28,659 for the SoC ablates all cohorts. However, no significant – clinical or statistical, difference in effectiveness was observed. The higher cost of the ablate all cohort was associated with higher AF recurrence and costs of AF treatment. Probabilistic sensitivity analysis demonstrated the similar substantial difference between two procedures. The probability associated with AF recurrence in SoC was most sensitive variable. **CONCLUSIONS:** MRI-guided selective ablation is economically beneficial with annual savings of $5,421 per person with same effectiveness compared to current SoC. Future research taking QoL and age into account is warranted to help payers assess the CE of ablation procedure in AF patients.

PCV81
AN ECONOMIC ANALYSIS OF A HYPOTHETICAL VALUE-BASED INSURANCE DESIGN PROGRAM USING THE ARCHIMEDES MODEL
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OBJECTIVES: Value-based insurance design (VBID) programs aim to encourage patient use of high value health care services, often with the goal of reducing overall cost. We investigate a hypothetical VBID program of copay elimination for statins to determine if it is cost saving and cost effective. **METHODS:** The Archimedes Model was used to simulate the outcomes of increased statin adherence due to copay elimination. 10,000 individuals representative of US population who had been prescribed statins were modeled over a 10 year timeframe, subjected to a two-arm virtual trial: one arm represents current care and the other arm represents copay elimination. Based on a literature review, statin adherence rates were increased by 3% in the copay elimination arm. Statin prices, based on generic prices, were $12/mo for Atorastatin80, $4/mo for Simvastatin80, and $3/mo for all other Simvastatin doses. **RESULTS:** The VBID program failed to be cost saving, costing insurers $20 per person per year over the 10 year timeframe. The program saved 37 life years and 33 QALYs at a discounted cost of $66,000 per discounted QALY with 0.03 discount rate. For shorter timeframes the average cost remained constant and the program was even less cost effective. Follow-up simulations and analyses show that the program is increasingly cost effective in high risk subpopulations. For a population(n=928) ages 60 to 70 with diabetes and prior MIs the program became cost saving after 12 years, having saved $94,000 over 20 years. **CONCLUSIONS:** The proposed VBID program failed to be cost saving because the benefit of increased statin adherence was small compared to the cost of copay elimination for all statin users. This failure to find cost savings is consistent with the published observational studies. To achieve cost savings VBID programs should be targeted according to individual risk.

PCV82
COST-EFFECTIVENESS OF RIVAROXABAN VERSUS DABIGATRAN FOR THROMOBOPROPHYLAXIS IN TOTAL HIP REPLACEMENT SURGERY IN THE UNITED STATES
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OBJECTIVES: American College of Chest Physicians (ACCP) guideline recommends the use oral medication either rivaroxaban or dabigtran in patients who are undergoing major orthopedic surgery and decline injections. This study assessed the cost-effectiveness of rivaroxaban verus dabigatran for prevention of venous thromboembolism (VTE) and bleeding episode after total hip replacement (THR) surgery from Medicare perspective. **METHODS:** A 6-month decision-tree model was developed to compare the cost-effectiveness of rivaroxaban and dabigatran for THR. Treatment efficacy and safety data such as probabilities of distal and proximal deep vein thrombosis (DVT), symptomatic pulmonary embolism (PE), and major bleeding were derived from randomized controlled trials and systematic reviews. Cost of medications were derived from the Redbook (2012) and cost of DVT, PE and major/minor bleeding episodes were based on diagnosis code related payment (2009). Guidelines consistent diagnosis procedure for VTE and current procedure terminology (CPT) codes were utilized for determining procedure costs. All cost data was adjusted to 2012 dollars. A discount rate of 3% was applied to base-case analysis and sensitivity analysis were conducted to characterize uncertainty in the decision model. **RESULTS:** The prophylaxis medication cost for rivoraxaban and dabigatran was $422.51 and $392.61, respectively for per person per event. The cost of treating major bleeding episode and VTE were $14,548.09 and $14,114.80, respectively per person per event. There were absence of any head-to-head studies comparing the dabigatran and rivaroxaban. Compared to standards heparin regimen, rates of bleeding events did not differ significantly between dabigatran etexilate and rivaroxaban. However, the rates of having VTE event were higher in rivaroxaban compared to The prophylaxis treatment with dabigatran was $164.40 less costly than rivaroxaban for prevention of VTE and bleeding episode in patient undergoing THR. **CONCLUSIONS:** Dabigatran and rivaroxaban share similar adverse events profiles, however, dabigatran was found to be more cost-saving compared to rivaroxaban.

PCV83
THE COST-EFFECTIVENESS OF DETECTING ARRHYTHMIA WITH IMPLANTABLE LOOP RECORDERS IN THE UNITED STATE OF AMERICA
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OBJECTIVES: To evaluate the cost-effectiveness of diagnosis with an ILR following Standard Testing (ST) after a syncopal event from a United States payer perspective. **METHODS:** This analysis considers all costs of diagnosis via ST and ILR, the costs and consequences of recurrent syncope, and the cost of arrhythmia treatment following diagnosis. A Markov model was developed to reflect the recurrence of syncopal events in undiagnosed patients. Due to documented differences in the prevalence of arrhythmia between patients with suspected arrhythmia and patients with unexplained syncope we considered the two populations separately, each over a 10-year time horizon. All costs and consequences were discounted at a 3% annual rate. **RESULTS:** The results are similar for suspected arrhythmia and unexplained syncope. In the suspected arrhythmia population, the incremental cost of the ILR strategy is $14,712. The incremental Quality Adjusted Life Years (QALY) are estimated to be between 0.2806 and 0.4282, and the incremental cost-effectiveness ratio (ICER) is between $34,400 and $52,400. The syncopal events avoided with ILR are 402 per 1,000 patients. In the unexplained syncope population the incremental costs and effects are lower compared to the previous case: $13,800, and between 0.2174 and 0.3317 QALYs gained. The ICER is between $41,600 and $63,500 per QALY gained. The number of syncopal events avoided with ILR is 311 per 1,000 patients. In 1,000 patients the ILR strategy is estimated to identify between 300 and 380 more arrhythmia cases compared to ST in the two populations. **CONCLUSIONS:** When considering all costs in combination with the syncopal events avoided and quality of life (QoL), ILR arrhythmia diagnosis is a cost-effective alternative to ST. The use of ILR increases the diagnostic yield in both populations and guides treatment in more patients compared to ST.

PCV84
COST EFFECTIVENESS EVALUATION OF APIXABAN, DABIGATRAN RIVAROXABAN AND WARFARIN FOR PREVENTION OF TROMBOEMBOLISM IN PATIENTS WITH ATRIAL FIBRILLATION IN TRINIDAD AND TOBAGO
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OBJECTIVES: The main goal of treatments for AF is stroke prevention since the annual risk of stroke is 5–6 times greater in patients with AF than in people with a normal heart rhythm. [1] The incidence of AF increases from less than 0.1% per year in those under 40 years old to exceed 1.5% per year in women and 2% in men older than 80. [2] This study assesses the cost-effectiveness (CE) of Apixaban versus other anticoagulation therapies for prevention on NVAF, from the private health care perspective. **METHODS:** A Markov decision-tree model was made to compare costs and effectiveness of Warfarin (5 mg/24 hours), Apixaban (5 mg/12 hours), Dabigatran (110 mg/12 hours and 150 mg/12 hours), and Rivaroxaban (20 mg/24 hours) in a simulated cohort of 1000 patients with AF. Effectiveness measures were: stroke, bleeding, myocardial infarction (MI) rates and deaths. Local costs were gathered from Trinidad's Private Health System databases (US$, 2013) and only